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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,219	06/23/2003	Thomas H. Turpen	LSBC-0087-CN09B	3972

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EXAMINER
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RAMIREZ, DELIA M

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/602,219	<b>Applicant(s)</b> TURPEN ET AL.	
	<b>Examiner</b> Delia M. Ramirez	<b>Art Unit</b> 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Status of the Application***

Claims 1-18 are pending.

It is noted that while claim 1 refers to SEQ ID NO: 31 and 32 as nucleotide sequences, the sequence listing of the instant application shows these sequences to be amino acid sequences. For restriction purposes, the recitation of SEQ ID NO:31 and 32 has been ignored as it is unclear which is the intended subject matter to be claimed (e.g., a polynucleotide encoding the polypeptide of SEQ ID NO:31 or 32, or a polypeptide comprising SEQ ID NO:31 or 32).

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:3 or encoding the polypeptide of SEQ ID NO:4, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.
  - II. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:5 or encoding the polypeptide of SEQ ID NO:6, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.
  - III. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:7 or encoding the polypeptide of SEQ ID NO:8, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.
  - IV. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:9 or

encoding the polypeptide of SEQ ID NO:10, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.

V. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:11 or encoding the polypeptide of SEQ ID NO:12, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.

VI. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:13 or encoding the polypeptide of SEQ ID NO:14, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.

VII. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:15 or encoding the polypeptide of SEQ ID NO:16, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.

VIII. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:17 or encoding the polypeptide of SEQ ID NO:18, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.

IX. Claims 1-6, 8-9, drawn in part to a polynucleotide comprising SEQ ID NO:19 or encoding the polypeptide of SEQ ID NO:20, vectors and virus particles comprising said polynucleotide, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.2.

X. Claims 13-18, drawn in part to a polynucleotide encoding the polypeptide of

SEQ ID NO:37, and a plant cell comprising said polynucleotide, classified in class 532, subclass 23.1.

- XI. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:3 or encoding the polypeptide of SEQ ID NO:4, classified in class 800, subclass 295.
- XII. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:5 or encoding the polypeptide of SEQ ID NO:6, classified in class 800, subclass 295.
- XIII. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:7 or encoding the polypeptide of SEQ ID NO:8, classified in class 800, subclass 295.
- XIV. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:9 or encoding the polypeptide of SEQ ID NO:10, classified in class 800, subclass 295.
- XV. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:11 or encoding the polypeptide of SEQ ID NO:12, classified in class 800, subclass 295.
- XVI. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:13 or encoding the polypeptide of SEQ ID NO:14, classified in class 800, subclass 295.
- XVII. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:15 or encoding the polypeptide of SEQ ID NO:16, classified in class 800, subclass 295.
- XVIII. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising

SEQ ID NO:17 or encoding the polypeptide of SEQ ID NO:18, classified in class 800, subclass 295.

- XIX. Claims 5-6, 9, drawn in part to a plant comprising a polynucleotide comprising SEQ ID NO:19 or encoding the polypeptide of SEQ ID NO:20, classified in class 800, subclass 295.
- XX. Claims 16-18, drawn in part to a plant comprising a polynucleotide encoding the polypeptide of SEQ ID NO:37, classified in class 800, subclass 295.
- XXI. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:4, classified in class 435, subclass 208.
- XXII. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:6, classified in class 435, subclass 208.
- XXIII. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:8, classified in class 435, subclass 208.
- XXIV. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:10, classified in class 435, subclass 208.
- XXV. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:12, classified in class 435, subclass 208.
- XXVI. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:14, classified in class 435, subclass 208.
- XXVII. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:16, classified in class 435, subclass 208.
- XXVIII. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:18, classified in class 435, subclass 208.
- XXIX. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:20, classified in

Art Unit: 1652

class 435, subclass 208.

XXX. Claim 7, drawn in part to a polypeptide comprising SEQ ID NO:37, classified in class 530, subclass 300.

The inventions are distinct, each from the other because of the following reasons:

2. Groups I-XXX each comprise a chemically unrelated structure capable of separate manufacture, use, and effect. The nucleic acids of Groups I-X comprise purine and pyrimidine units, the proteins of Groups XXI-XXX comprise amino acids, and the plants of Groups XI-XX are multicellular organisms, thus being structurally and functionally distinct molecules. The nucleic acids of Group I-X have other uses besides encoding the proteins of Groups XXI-XXX or being introduced in the transgenic plants of Groups XI-XX, such as a hybridization probe or in gene therapy. Further, the proteins of Groups XXI-XXX can be prepared by processes which are materially different from recombinant expression of the nucleic acid of Groups I-X or expression in the transgenic plants of Groups XI-XX, such as by chemical synthesis, or by isolation and purification from natural sources. In addition, the transgenic plants of Groups XI-XX have other uses in addition to produce the proteins of Groups XXI-XXX, such as in the production of compounds naturally found in those transgenic plants, or fruits naturally produced by those plants, if they are fruit-bearing plants.

3. The inventions of Groups I-XXX are members of improper Markush groups as the nucleic acids of Groups I-X, the proteins of Groups XXI-XXX, and the plants of Groups XI-XX do not have unity of invention according to MPEP § 803.02. Each of the nucleic acids of Groups I-X comprise an unrelated nucleotide sequence, each of the polypeptides of Groups XXI-XXX have an unrelated amino acid sequence, and the plants of Groups XI-XX comprise different nucleic acids. As such, each of the nucleic acids of Groups I-X can be used to probe different targets and would encode proteins of different structure. Also, the proteins of Groups XXI-XXX would elicit different antibodies since their amino acid sequences are unrelated. Therefore, there is no unity of invention within the members of the Markush

Art Unit: 1652

group as there is no shared common utility and there is no shared substantial structural feature disclosed as being essential to that utility.

4. As set forth in MPEP § 803, the criteria for a proper restriction between patentably distinct inventions requires that the inventions must be independent or distinct as claimed, and a search of all the inventions would impose a serious burden on the examiner. Groups I-XXX have been shown to be independent or distinct, for the reasons set forth above. MPEP § 803 also indicates that a serious burden on the examiner may be prima facie shown if the Examiner shows by appropriate explanation either separate classification, separate status in the art, or a different field of search. The inventions of Groups I-XXX have acquired a separate status in the art because of their recognized divergent subject matter, as shown by their different classification. In addition, a search of all the inventions would require at a minimum a separate patented/non-patented literature search and a class/subclass search. These searches are not all co-extensive. Therefore a comprehensive examination of all groups would impose an undue burden on the Examiner. Thus, restriction for examination purposes as indicated is proper.

5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement can be traversed (37 CFR 1.143).

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->



Art Unit: 1652

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delia M. Ramirez whose telephone number is (571) 272-0938. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy can be reached on (571) 272-0928. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.



Delia M. Ramirez, Ph.D.  
Patent Examiner  
Art Unit 1652

DR  
November 14, 2005